

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
LINCOLN LABORATORY
LEXINGTON 73, MASSACHUSETTS

Volunteer 2-3370

27 February 1962

Dr. Joshua Lederberg
Department of Genetics
Stanford University Medical Center
Palo Alto, California

Dear Dr. Lederberg:

Thank you very much for your kind letter of February 20, 1962. It was somewhat delayed because you will note that the Lincoln Laboratory is in Lexington, Massachusetts, and not in Cambridge.

The two reports that I sent you are all that I have published on this subject. The rest of the data is still in the form of computer print-outs.

At your suggestion I sent copies of my report to Dr. Robinson in Washington.

Our work has been carried on at a very slow and part-time pace at the Lincoln Laboratory, financed from our general research funds. We believe that a more systematic attack is called for, but we cannot do it without some serious support from a responsible government agency. Since November 1961 we have had a proposal with the National Science Foundation for a \$50,000 grant that will enable us to do a serious engineering design of a model information center. As of now, this proposal is still under consideration.

We may eventually come up against tough technical and logical problems, but as of now the problem is almost sociological in nature. How does one get a government agency to provide speculative "seed money" for research into a new technological problem that is hardly even defined. It is fairly easy to champion this or that specific device or program and get some support for it. But if one states frankly that one intends to start with only the broadest appreciation of function and then let the components and programs evolve as the need arises, the proposal is considered too vague. And yet those of us who have had experience with complex systems design in other fields know that no other approach has worked in the early stages of development. One

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simply cannot design these things analytically and expect them to work at the turn of a switch. One must first build a viable model, place it in a realistic environment and through careful observation and monitoring encourage an evolutionary process of growth.

If your panel is still in session, and if it accepts presentations from nonmembers, I would welcome the opportunity to discuss my ideas with you.

Sincerely,

A handwritten signature in cursive script that reads "M. M. Kessler". The signature is written in dark ink and has a fluid, connected style.

MMK/jes

M. M. Kessler